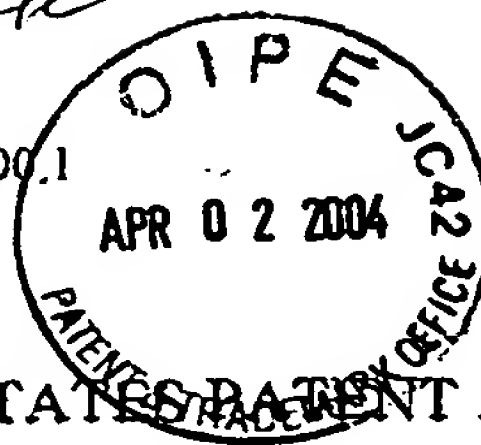


@PFD\desktop\ODMA\MHODMA\HBSR05,1\Manage,453600,1  
AJC:jcc  
February 18, 2004

PATENT APPLICATION  
DOCKET NO. 0399.2008-002



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Thomas Tuschl, Phillip D. Zamore, Phillip A. Sharp and David P. Bartel

Application No.: 09/821,832 Group Art Unit: 1637

Filed: March 30, 2001 Examiner: S. Chunduru

Confirmation No.: 6240

Title: RNA Sequence-Specific Mediators of RNA Interference

CERTIFICATE OF MAILING OR TRANSMISSION	
I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as First Class Mail in an envelope addressed to Commissioner for Patents, P O Box 1450, Alexandria, VA 22313-1450, or is being facsimile transmitted to the United States Patent and Trademark Office on.	
3/31/04	<i>Jenine Crump</i>
Date	Signature
<i>Jenine Crump</i>	
Typed or printed name of person signing certificate	

**REVOCATION OF POWERS OF ATTORNEY**  
**AND APPOINTMENT OF NEW ATTORNEYS AND/OR AGENTS**  
**AND CHANGE OF CORRESPONDENCE ADDRESS**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

**Max-Planck-Gesellschaft Zur Forderung Der Wissenschaften E.V.**, a Corporation duly organized under the laws of the Country of the Federal Republic of Germany, is an assignee of the entire right, title and interest in the above-identified application, along with, **Whitehead Institute for Biomedical Research**, a Corporation duly organized under the laws of the State of Delaware, **University of Massachusetts Medical Center**, a Corporation duly organized under the laws of the Commonwealth of Massachusetts, and **Massachusetts Institute of Technology**, a Corporation duly organized under the laws of the Commonwealth of Massachusetts. **Max-Planck-Gesellschaft Zur Forderung Der Wissenschaften E.V.** hereby appoints the attorneys and/or agents associated with:

09/821,832

-2-

**Customer No. 23628**  
Wolf, Greenfield & Sacks, P.C.  
Federal Reserve Plaza  
600 Atlantic Avenue  
Boston, MA 02210  
Tel: +1.617.720.3500/ 617-573-7859  
Fax: +1.617.720.2441  
hlockhart@wolfgreenfield.com

to prosecute the above-identified application and any divisions or continuations thereof and to conduct all business in the United States Patent and Trademark Office. All previously granted Powers of Attorney are hereby revoked.

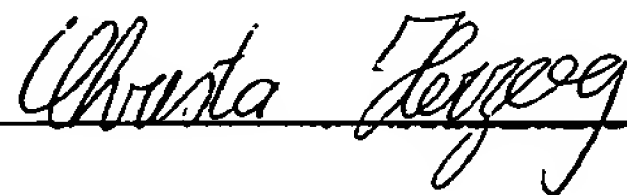
A Statement under 37 C.F.R. §3.73(b) is submitted herewith.

All correspondence should be sent to Customer No. 23628, Wolf, Greenfield & Sacks, P.C., 600 Atlantic Avenue, Boston, MA 02210. Please direct all telephone calls to Helen C. Lockhart, Ph.D. at 617-720-3500, and all facsimile communications to 617-720-2441.

Respectfully submitted,

**Max-Planck-Gesellschaft Zur Forderung  
Der Wissenschaften E.V.**

Name Christa Herzog

Signature 

Title Head of Patent Department

Date March 18, 2004

Docket No. 0399.2008-002

## STATEMENT UNDER 37 C.F.R. § 3.73(b)

Applicant(s): Thomas Tuschl, Phillip D. Zamore, Phillip A. Sharp and David P. Bartel  
Application No.: 09/821,832 Filed: March 30, 2001  
For: RNA Sequence-Specific Mediators of RNA Interference

Max-Planck-Gesellschaft zur Förderung der Wissenschaften E.V., a corporation  
(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is

- A. ☐ the assignee of the entire right, title and interest in the patent application identified above; or  
B. ☒ an assignee, together with, Whitehead Institute for Biomedical Research, Massachusetts Institute of Technology and University of Massachusetts Medical Center, of the entire right, title and interest in the patent application identified above. A separate Statement under 37 CFR § 3.73(b) is being submitted

The right, title and interest of the above-named assignee in the patent application identified above is established by virtue of:

- A. ☒ An assignment from Thomas Tuschl, co-inventor(s) of the patent application identified above. The assignment from Thomas Tuschl to Whitehead Institute for Biomedical Research and Max-Planck-Gesellschaft zur Förderung der Wissenschaften E.V. was recorded in the Patent and Trademark Office at Reel 012089, Frames 0934-0937

OR

- B. ☐ A chain of title from the inventor(s) of the patent application identified above, to the current assignee as shown below

1. From: \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the Patent and Trademark Office at  
Reel \_\_\_\_\_, Frame \_\_\_\_\_, or a copy thereof is attached
2. From: \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the Patent and Trademark Office at  
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3. From: \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the Patent and Trademark Office at  
Reel \_\_\_\_\_, Frame \_\_\_\_\_, or a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

Signature: Christa Herzog  
Name: Christa Herzog  
Title: Head of Patent Department  
Date: March 18, 2004

@PFD\desktop\ODMA\MHODMA\HBSR05, Manage;453588.1  
AJC jcc  
February 18, 2004



PATENT APPLICATION  
DOCKET NO. 0399.2008-002

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Thomas Tuschl, Phillip D. Zamore, Phillip A. Sharp and David P. Bartel

Application No.: 09/821,832 Group Art Unit: 1637

Filed: March 30, 2001 Examiner: S. Chunduru

Confirmation No.: 6240

Title: RNA Sequence-Specific Mediators of RNA Interference

<b>CERTIFICATE OF MAILING OR TRANSMISSION</b>	
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Date	Signature
<i>Jenine Crump</i>	
Typed or printed name of person signing certificate	

**REVOCATION OF POWERS OF ATTORNEY**  
**AND APPOINTMENT OF NEW ATTORNEYS AND/OR AGENTS**  
**AND CHANGE OF CORRESPONDENCE ADDRESS**

Commissioner for Patents  
P O. Box 1450  
Alexandria, VA 22313-1450

Sir:

**University of Massachusetts Medical Center**, a Corporation duly organized under the laws of the Commonwealth of Massachusetts is an assignee of the entire right, title and interest in the above-identified application, along with **Max-Planck-Gesellschaft Zur Forderung Der Wissenschaften E.V.**, a Corporation duly organized under the laws of the Country of the Federal Republic of Germany, **Whitehead Institute for Biomedical Research**, a Corporation duly organized under the laws of the State of Delaware, and **Massachusetts Institute of Technology**, a Corporation duly organized under the laws of the Commonwealth of Massachusetts. **University of Massachusetts Medical Center** hereby appoints the attorneys and/or agents associated with:

09/821,832

-2-

**Customer No. 23628**  
Wolf, Greenfield & Sacks, P.C.  
Federal Reserve Plaza  
600 Atlantic Avenue  
Boston, MA 02210  
Tel: +1.617.720.3500/ 617-573-7859  
Fax: +1.617.720.2441  
hlockhart@wolfgreenfield.com

to prosecute the above-identified application and any divisions or continuations thereof and to conduct all business in the United States Patent and Trademark Office. All previously granted Powers of Attorney are hereby revoked.

A Statement under 37 C.F.R. §3.73(b) is submitted herewith.

All correspondence should be sent to Customer No. 23628, Wolf, Greenfield & Sacks, P.C., 600 Atlantic Avenue, Boston, MA 02210. Please direct all telephone calls to Helen C. Lockhart, Ph.D. at 617-720-3500, and all facsimile communications to 617-720-2441.

Respectfully submitted,

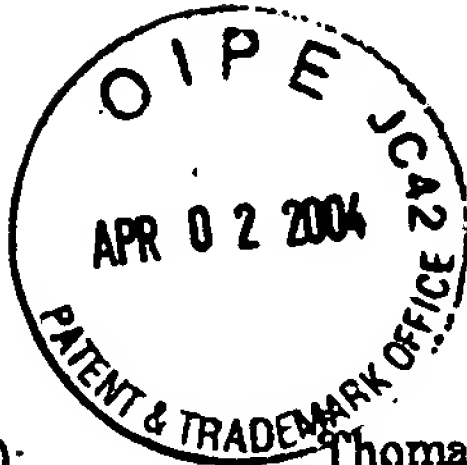
**University of Massachusetts Medical Center**

Name Chester A. Bisbee, Ph.D., J.D.

Signature 

Title Acting Director, Office of Technology Management

Date 2-19-04

Docket No. 0399.2008-002STATEMENT UNDER 37 C.F.R. § 3.73(b)Applicant(s): Thomas Tuschl, Phillip D. Zamore, Phillip A. Sharp and David P. BartelApplication No.: 09/821,832 Filed: March 30, 2001For: RNA Sequence-Specific Mediators of RNA InterferenceUniversity of Massachusetts Medical Center

(Name of Assignee)

a corporation

(Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is

- A. ☐ the assignee of the entire right, title and interest in the patent application identified above; or
- B. ☒ an assignee, together with Max-Planck-Gesellschaft zur Förderung der Wissenschaften E.V., Whitehead Institute for Biomedical Research and Massachusetts Institute of Technology, of the entire right, title and interest in the patent application identified above. A separate Statement under 37 CFR § 3.73(b) is being submitted.

The right, title and interest of the above-named assignee in the patent application identified above is established by virtue of.

- A. ☒ An assignment from Phillip D. Zamore, co-inventor(s) of the patent application identified above. The assignment from Phillip D. Zamore to University of Massachusetts Medical Center was recorded in the Patent and Trademark Office at Reel 012089, Frame 0914-0916

OR

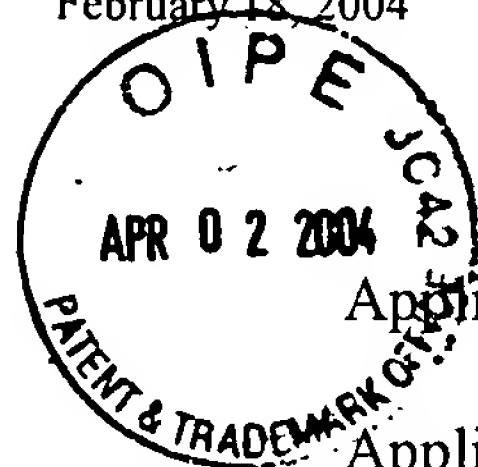
- B. ☐ A chain of title from the inventor(s) of the patent application identified above, to the current assignee as shown below:

1. From \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or a copy thereof is attached.
2. From \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or a copy thereof is attached.
3. From \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet.

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

Signature: Chester A. BisbeeName: Chester A. Bisbee, Ph.D., J.D.Title: Acting Director, Office of Technology ManagementDate: 2-19-04



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Thomas Tuschl, Phillip D. Zamore, Phillip A. Sharp and David P. Bartel

Application No.: 09/821,832 Group Art Unit: 1637

Filed: March 30, 2001 Examiner: S. Chunduru

Confirmation No.: 6240

Title: RNA Sequence-Specific Mediators of RNA Interference

CERTIFICATE OF MAILING OR TRANSMISSION	
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Date	Signature
<i>Jenine Crump</i>	
Typed or printed name of person signing certificate	

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AND APPOINTMENT OF NEW ATTORNEYS AND/OR AGENTS  
AND CHANGE OF CORRESPONDENCE ADDRESS

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

**Massachusetts Institute of Technology**, a Corporation duly organized under the laws of the Commonwealth of Massachusetts is an assignee of the entire right, title and interest in the above-identified application, along with **Max-Planck-Gesellschaft Zur Forderung Der Wissenschaften E.V.**, a Corporation duly organized under the laws of the Country of the Federal Republic of Germany, **Whitehead Institute for Biomedical Research**, a Corporation duly organized under the laws of the State of Delaware, and **University of Massachusetts Medical Center**, a Corporation duly organized under the laws of the Commonwealth of Massachusetts. **Massachusetts Institute of Technology** hereby appoints the attorneys and/or agents associated with:



**Customer No. 23628**  
Wolf, Greenfield & Sacks, P.C.  
Federal Reserve Plaza  
600 Atlantic Avenue  
Boston, MA 02210  
Tel: +1.617.720.3500/ 617-573-7859  
Fax: +1.617.720.2441  
hlockhart@wolfgreenfield.com

to prosecute the above-identified application and any divisions or continuations thereof and to conduct all business in the United States Patent and Trademark Office. All previously granted Powers of Attorney are hereby revoked.

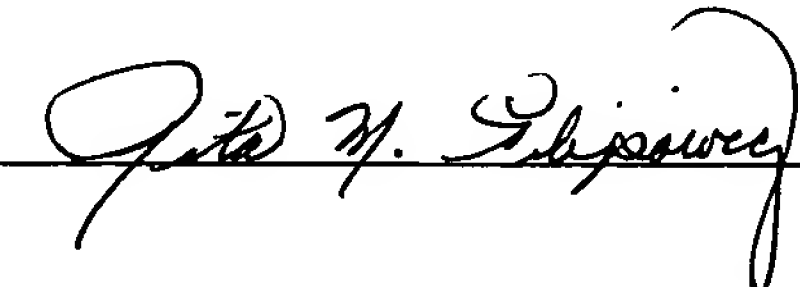
A Statement under 37 C.F.R. §3.73(b) is submitted herewith.

All correspondence should be sent to Customer No. 23628, Wolf, Greenfield & Sacks, P.C., 600 Atlantic Avenue, Boston, MA 02210. Please direct all telephone calls to Helen C. Lockhart, Ph.D. at 617-720-3500, and all facsimile communications to 617-720-2441.

Respectfully submitted,

**Massachusetts Institute of Technology**

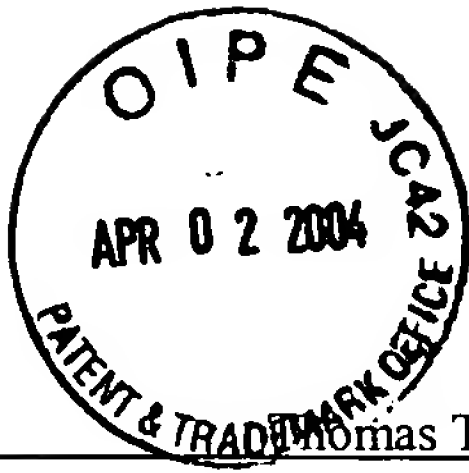
Name Rita M. Filipowicz

Signature 

Title Patent Administrator

Date 3/30/04





Docket No. 0399.2008-002

STATEMENT UNDER 37 C.F.R. § 3.73(b)

Applicant(s): Thomas Tuschl, Phillip D. Zamore, Phillip A. Sharp and David P. Bartel

Application No.: 09/821,832 Filed: March 30, 2001

For: RNA Sequence-Specific Mediators of RNA Interference

Massachusetts Institute of Technology, a corporation,  
(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is

- A. ☐ the assignee of the entire right, title and interest in the patent application identified above; or
- B. ☒ an assignee, together with, Max-Planck-Gesellschaft zur Förderung der Wissenschaften E.V., Whitehead Institute for Biomedical Research and University of Massachusetts Medical Center, of the entire right, title and interest in the patent application identified above. A separate Statement under 37 CFR § 3.73(b) is being submitted.

The right, title and interest of the above-named assignee in the patent application identified above is established by virtue of:

- A. ☒ An assignment from Phillip A. Sharp, co-inventor(s) of the patent application identified above. The assignment from Phillip A. Sharp to Massachusetts Institute of Technology was recorded in the Patent and Trademark Office at Reel 012089, Frame 0942-0944.

OR

- B. ☐ A chain of title from the inventor(s) of the patent application identified above, to the current assignee as shown below:

1. From: \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the Patent and Trademark Office at  
Reel \_\_\_\_\_, Frame \_\_\_\_\_, or a copy thereof is attached.
2. From: \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the Patent and Trademark Office at  
Reel \_\_\_\_\_, Frame \_\_\_\_\_, or a copy thereof is attached.
3. From: \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the Patent and Trademark Office at  
Reel \_\_\_\_\_, Frame \_\_\_\_\_, or a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet.

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

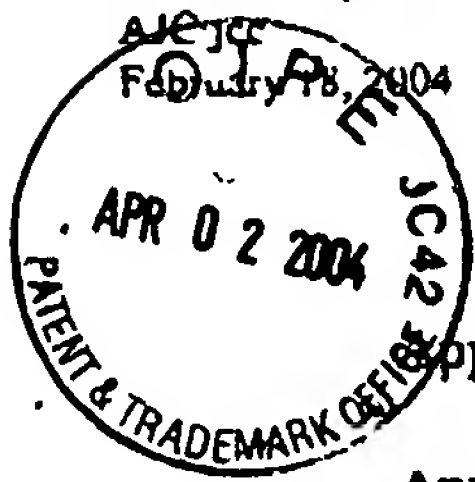
Signature: Rita M. Filipowicz

Name: Rita M. Filipowicz

Title: Patent Administrator

Date: 3/30/04

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PATENT APPLICATION  
DOCKET NO 0399 2008-002

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Thomas Tuschl, Phillip D. Zamore, Phillip A. Sharp and David P. Bartel

Application No.: 09/821,832 Group Art Unit: 1637

Filed: March 30, 2001 Examiner: S. Chunduru

Confirmation No.: 6240

Title: RNA Sequence-Specific Mediators of RNA Interference

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<u>3/31/04</u>	<u>Jenine Crump</u>
Date	Signature
<u>Jenine Crump</u>	
Typed or printed name of person signing certificate	

**REVOCATION OF POWERS OF ATTORNEY**  
**AND APPOINTMENT OF NEW ATTORNEYS AND/OR AGENTS**  
**AND CHANGE OF CORRESPONDENCE ADDRESS**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

**Whitehead Institute for Biomedical Research**, a Corporation duly organized under the laws of the State of Delaware, is an assignee of the entire right, title and interest in the above-identified application, along with **Max-Planck-Gesellschaft Zur Forderung Der Wissenschaften E.V.**, a Corporation duly organized under the laws of the Country of the Federal Republic of Germany, **University of Massachusetts Medical Center**, a Corporation duly organized under the laws of the Commonwealth of Massachusetts, and **Massachusetts Institute of Technology**, a Corporation duly organized under the laws of the Commonwealth of Massachusetts. **Whitehead Institute for Biomedical Research** hereby appoints the attorneys and/or agents associated with:

09/821,832

-2-

**Customer No. 23628**  
**Wolf, Greenfield & Sacks, P.C.**  
**Federal Reserve Plaza**  
**600 Atlantic Avenue**  
**Boston, MA 02210**  
**Tel: 1.617.720.3500/ 617-573-7859**  
**Fax: 1.617.720.2441**

to prosecute the above-identified application and any divisions or continuations thereof and to conduct all business in the United States Patent and Trademark Office. All previously granted Powers of Attorney are hereby revoked.

A Statement under 37 C.F.R. §3.73(b) is submitted herewith.

All correspondence should be sent to Customer No. 23628, Wolf, Greenfield & Sacks, P.C., 600 Atlantic Avenue, Boston, MA 02210. Please direct all telephone calls to Helen C. Lockhart, Ph.D. at 617-720-3500, and all facsimile communications to 617-720-2441.

Respectfully submitted,

**Whitehead Institute for Biomedical Research**

By Patricia Granahan  
Patricia Granahan, Esq.

Title Patent Counsel

Date February 18, 2004

Docket No. 0399.2008-002STATEMENT UNDER 37 C.F.R. § 3.73(b)Applicant(s) Thomas Tuschl, Phillip D. Zamore, Phillip A. Sharp and David P. BartelApplication No.: 09/821,832 Filed: March 30, 2001For RNA Sequence-Specific Mediators of RNA Interference

Whitehead Institute for Biomedical Research a corporation  
(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is

- A. ☐ the assignee of the entire right, title and interest in the patent application identified above; or
- B. ☒ an assignee, together with Max-Planck-Gesellschaft zur Förderung der Wissenschaften E.V., Massachusetts Institute of Technology and University of Massachusetts Medical Center, of the entire right, title and interest in the patent application identified above. A separate Statement under 37 CFR § 3.73(b) is being submitted

The right, title and interest of the above-named assignee in the patent application identified above is established by virtue of:

- A ☒ Assignments from Thomas Tuschl and David P. Bartel, co-inventor(s) of the patent application identified above.

The assignment from Thomas Tuschl to Whitehead Institute for Biomedical Research and Max-Planck-Gesellschaft zur Förderung der Wissenschaften E.V. was recorded in the Patent and Trademark Office at Reel 012089, Frames 0934-0937.

The assignment from David P. Bartel to Whitehead Institute for Biomedical Research was recorded in the Patent and Trademark Office at Reel 012089, Frames 0904-0906.

OR

- B ☐ A chain of title from the inventor(s) of the patent application identified above, to the current assignee as shown below:

1. From: \_\_\_\_\_ To: \_\_\_\_\_  
 The document was recorded in the Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or a copy thereof is attached.
2. From: \_\_\_\_\_ To: \_\_\_\_\_  
 The document was recorded in the Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or a copy thereof is attached.
3. From: \_\_\_\_\_ To: \_\_\_\_\_  
 The document was recorded in the Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet.

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

Signature: Patricia GranahanName: Patricia GranahanTitle: Patent CounselDate: February 15, 2004